

Location



JE CERTIFIE PAR LES PRESENTES QUE LES PIECES D'ACHONETS  
DECARTES DANS LE PRESENT CERTIFICAT ONT ETE OBTENUES D'UNE  
SOURCE D'APPROVISIONNEMENT CONFORME AUX CONDITIONS  
AUXQUELLES LE CERTIFICAT D'AUTORISATION DE DISTRIBUTION  
NO. 12-89 DU MINISTERE DES TRANSPORTS A ETE ATTRIBUE.  
DATE 22 Septembre 2014  
Brenda Shea





E30769

22 SEP. 2014

## Certificate of Analysis

AIR DYNAMICS CO. LTD.  
19420B CLARK GRAHAM AVE.  
BAIE D'URFÉ, QUÉ. H9X 3R8  
TÉL: (514) 457-4287

Page 1 of 2

3M SPRINGFIELD  
3211 E CHESTNUT EXPY  
SPRINGFIELD MO 658022592 US

3M CANADA COMPANY 2751 PEDDIE RD  
MILTON ONL9T 0K1

Date certificate is prepared: Jun-20-2014

Order Ship Date:

Jun-23-2014

The 3M product listed below was produced in accordance with standard manufacturing processes for the product in effect at the time of manufacture and is certified to meet the specifications displayed below.

3M Invoice Number EB52476	Customer PO Number FX236	Customer Part Number
3M Stock Number 62-3593-1435-8 UPC Number 00021200822254	Product Description S/W DP-460 OFF-WHITE EPOXY ADH 1.25 FL OZ DUO-PAK	
Shelf Life 15 MONTHS FROM SHIPMENT DATE	Storage Condition for this Product NO SPECIAL REQUIREMENTS	

Base Lot Number:4065AQ

Date of Manufacture:Mar-06-2014

Test Property	Min.Spec	Max.Spec	Units	Results
Viscosity, Brookfield RVT #7@20 rpm, 80 F - nominal	15000	50000	CPS	32600
Weight Per Gallon (Density)	9.30	9.70	LBS	9.5
Visual - Appearance	Pass		P/F	p

Accelerator Lot Number:4055AM

Date of Manufacture:Feb-24-2014

Test Property	Min.Spec	Max.Spec	Units	Results
Visual - Gardner Color Scale		6	NUMBER	4
Viscosity, Brookfield RVF #6@20 rpm, 80 F - nominal	8000	14000	CPS	12450
Weight Per Gallon (Density)	8.80	9.20	LBS	9.0
Visual - Appearance	Pass		P/F	P

Combined Base Accelerator

Test Property	Min.Spec	Max.Spec	Units	Results
Work Life (20 grams)	90	120	MIN	106
Overlap Shear, Room Temp. AIClad AVERAGE	4000		PSI	5342
Bell Peel, M/M Peel @75F - AIClad AVERAGE	45.0		PIW	92.3

Please contact your 3M Customer Service Representative if you have any questions.

**Warranty and Limited Remedy:** Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable 3M specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is shown to be nonconforming within



30692

## Certificate of Analysis

15 SEP. 2014

DATE  
PAGE20 August 2014  
1 of 1

AIR DYNAMICS CO. LTD.

19420B CLARK GRAHAM AVE.

BAIE D'URFÉ, QUÉ. H9X 3R8

TÉL: (514) 457-4287

Date of P.O.:

14 July 2014

Sales Order:

90378776

Delivery Note or Debit Memo:

86360530

Delivery Note position:

900001

Customer No.:

438707

## Material:

LOCTITE EA 934NA QT AERO

(A)-1QT (B)-8OZ KIT HS

Known as: HYSOL EA 934NA QT SYSTEM

## Material-No:

1342442

## Legacy Code:

HS9174016

## Bulk Material:

891959

## Batch no:

JH4FAI0067

## Shipment Quantity:

96.000 EA

## Manufacture date:

14 June 2014

## Specification:

HS-AS9174

Revision: C

## Comments:

NOTE: SPECIFICATION REQUIREMENT APPLIES TO AVERAGE RESULT ONLY

Batch	Tested	Test Properties	Specification	Individuals	Avg	UOM
JH4F000067		Color, Pt A - Gray		OK		
JH4F000067		Appearance, Pt A - Uniform paste; NFM		OK		
JH4F000067		Weight per Epoxide, Pt A	174.00-190.00	174.26,178.36	176.31	g/eq
JH4F000067		Filler Content, Pt A	43.00-46.00	45.43,45.90	45.67	%(M)
JH4F000067		Viscosity, Pt A@77F (HBT#7, 20rpm)	3500-9000	5600,5780,6140	5840	poise
JH4F000067		Density, Pt A@77F	1.48-1.55	1.50	1.50	g per ml
JH4F000067		Color Value, Pt B (Gardner scale)	4-12	7	7	
JH4F000067		Appearance, Pt B - Semi-transparent liquid; NFM		OK		
JH4F000067		Amine Content, Pt B	11.80-14.00	12.23,12.44	12.34	%
JH4F000067		Viscosity, Pt B@77F (HBT#1, 20rpm)	10-30	21,21,21	21	poise
JH4F000067		Density, Pt B@77F	0.95-0.97	0.96	0.96	g per ml
JH4F000067		Barcol Hardness, Barcol@77F	>= 70	74	74	
JH4F000067		Cured Density, Pt A&Pt B @77F Combined	1.28-1.38	1.28	1.28	g per ml
JH4F000067		Pot Life, 450gms@77F	40-60	52	52	minute(s)
JH4F000067		Tensile Shear, TS@77F 100 (Bare/PAA)	>= 3000	3350,3380,3390,3480	3437	lb/sq.inch
JH4F000067		Tensile Shear, TS@180F 100 (Bare/PAA)	>= 2000	3500,3520 2640,2680,2830,2860	2837	lb/sq.inch
JH4F000067		Tensile Shear, TS@300F 100 (Bare/PAA)	>= 1000	2950,3080 1130,1170,1200,1220	1190	lb/sq.inch
JH4F000067		Date Of Testing,	July 16, 2014	1230		

The above identified product conforms to all requirements listed above at the date and place of shipment from Henkel. If altered in any manner this test report is not valid. Test reports are available for inspection at Henkel Corporation, Bay Point, California. Henkel warrants this product for 12 months from the date of shipment from Henkel or an authorized distributor when stored at a temperature of <=40F / <= 4C. The warranty set forth is exclusively for the benefit of any recipient of the above identified product shipped directly from Henkel or a distributor that has been expressly authorized in writing by Henkel to provide such warranty on behalf of Henkel. Unless received directly from Henkel, please refer to the provider's certified letter from Henkel that establishes them as a Henkel authorized entity.

*Signed Test Report on File*

Henkel Quality Assurance

Henkel Corporation,  
Aerospace Group  
2850 Willow Pass Road  
Bay Point, CA 94665-3237

Date of Shipment: 20 August 2014

Tel.: (925) 458-8000  
Fax: (925) 458 8030  
www.aerospace.henkel.com



# Certificate of Analysis

30692

15 SEP. 2014

DATE  
PAGE

20 August 2014  
1 of 1

## AIR DYNAMICS CO. LTD.

194208 CLARK GRAHAM AVE.

BAIE D'URFÉ, QUÉ. H9X 3R8

TÉL: (514) 457-4287

Date of P.O.:

Sales Order:

Delivery Note or Debit Memo:

Delivery Note position:

Customer No.:

14 July 2014

90378776

86360530

900001

438707

### Material:

LOCTITE EA 934NA QT AERO

(A)-1QT (B)-8OZ KIT HS

Known as: HYSOL EA 934NA QT SYSTEM

### Material-No:

### Legacy Code:

### Bulk Material:

### Batch no:

### Shipment Quantity:

### Manufacture date:

### Specification:

### Comments:

1342442

HS9174016

891959

JH4FAI0067

96.000 EA

14 June 2014

299-947-100 TYPE II CLASS 2

Revision: P

Batch Tested	Test Properties	Specification	Individuals	Avg	UOM
JH4F000067	Pot Life , Pot 100g	> = 30	60	60	minute(s)
JH4F000067	Tensile Shear , TS@77F 108 (Bare/FPL)	> = 2250	2510,2590,2800,2890	2772	lb/sq.inch
JH4F000067	Tensile Shear , TS@300F 106 (150F Cure)	> = 1000	2910,2930 1260,1270,1290,1300 1300	1284	lb/sq.inch

The above identified product conforms to all requirements listed above at the date and place of shipment from Henkel. If altered in any manner this test report is not valid. Test reports are available for inspection at Henkel Corporation, Bay Point, California. Henkel warrants this product for 12 months from the date of shipment from Henkel or an authorized distributor when stored at a temperature of  $\leq 40^{\circ}\text{F}$  /  $\leq 4^{\circ}\text{C}$ . The warranty set forth is exclusively for the benefit of any recipient of the above identified product shipped directly from Henkel or a distributor that has been expressly authorized in writing by Henkel to provide such warranty on behalf of Henkel. Unless received directly from Henkel, please refer to the provider's certified letter from Henkel that establishes them as a Henkel authorized entity.

*Signed Test Report on File*

### Henkel Quality Assurance

Henkel Corporation,  
Aerospace Group  
2850 Willow Pass Road  
Bay Point, CA 94665-3237

Date of Shipment: 20 August 2014

Tel.: (925) 458-8000

Fax: (925) 458 8030

www.aerospace.henkel.com



30692

## Certificate of Analysis

15 SEP. 2014

DATE  
PAGE20 August 2014  
1 of 1

AIR DYNAMICS CO. LTD.  
19420B CLARK GRAHAM AVE.  
BAIE D'URFÉ, QUÉ. H9X 3R8  
TÉL: (514) 457-4287

Date of P.O.: 14 July 2014  
Sales Order: 90378776  
Delivery Note or Debit Memo: 86360530  
Delivery Note position: 900001  
Customer No.: 438707

Material: LOCTITE EA 934NA QT AERO  
(A)-1QT (B)-8OZ KIT HS  
Known as: HYSOL EA 934NA QT SYSTEM  
Material-No: 1342442  
Legacy Code: HS9174016  
Bulk Material: 891959  
Batch no: JH4FAI0067  
Shipment Quantity: 96.000 EA  
Manufacture date: 14 June 2014  
Specification: MMM-A-132 TY/I CL/3 FM/P GRP 1  
Comments: REF: QPL-MMM-A-132-10 NOTICE 2; 02/14/2005  
Revision: B

Batch Tested	Test Properties	Specification	Individuals	Avg	UOM
JH4F000067	Tensile Shear , TS@77F 100 (Bare/PAA)	> = 3000	3350,3380,3390,3480 3500,3520	3437	lb/sq.inch
JH4F000067	Tensile Shear , TS@180F 100 (Bare/PAA)	> = 2000	2640,2660,2830,2860 2950,3080	2837	lb/sq.inch

The above identified product conforms to all requirements listed above at the date and place of shipment from Henkel. If altered in any manner this test report is not valid. Test reports are available for inspection at Henkel Corporation, Bay Point, California. Henkel warrants this product for 12 months from the date of shipment from Henkel or an authorized distributor when stored at a temperature of  $\leq 40^{\circ}\text{F}$  /  $\leq 4^{\circ}\text{C}$ . The warranty set forth is exclusively for the benefit of any recipient of the above identified product shipped directly from Henkel or a distributor that has been expressly authorized in writing by Henkel to provide such warranty on behalf of Henkel. Unless received directly from Henkel, please refer to the provider's certified letter from Henkel that establishes them as a Henkel authorized entity.

*Signed Test Report on File*

Henkel Quality Assurance

Henkel Corporation,  
Aerospace Group  
2850 Willow Pass Road  
Bay Point, CA 94565-3237

Date of Shipment: 20 August 2014

Tel.: (925) 458-8000  
Fax: (925) 458 8030  
www.aerospace.henkel.com

**RELEASE  
CERTIFICATE**

**AIR DYNAMICS**

19420B Clark Graham Avenue  
Baie d'Urfé, Québec, H9X 3R8

514-487-4287

AD-1(A)

QTY. 12

NOMENCLATURE

ADHESIVE (1.2502)

PART NUMBER

DP 460

MODEL or TYPE

MAKE

3m

SERIAL NUMBER

- (LOT# 4065AQ/4055AM)

NEW



REPAIRED

INSPECTED

OVERHAULED

MODIFIED

PREVIOUS CERTIFICATION

B# 30769 exp Sept. 23/2015

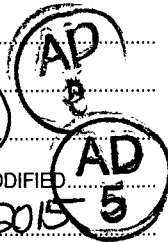
I HEREBY CERTIFY THAT THE AIRCRAFT PARTS, APPLIANCES AND/OR MATERIALS DESCRIBED HEREON  
WERE ACQUIRED FROM A SOURCE OF SUPPLY THAT IS CONSISTANT WITH THE CONDITIONS UNDER  
WHICH THE DEPARTMENT OF TRANSPORT DISTRIBUTOR APPROVAL NO. 12-89 HAS BEEN GRANTED.

DATE

September 22, 2014

INSPECTOR'S SIGNATURE

Brenda Sheu



JE CERTIFIE PAR LES PRESENTES QUE LES PIECES D'AERONEFS  
DECRIRES DANS LE PRESENT CERTIFICAT ONT ETE OBTENUES D'UNE  
SOURCE D'APPROVISIONNEMENT CONFORME AUX CONDITIONS  
AUXQUELLES LE CERTIFICAT D'AUTORISATION DE DISTRIBUTION  
NO. 12-89 DU MINISTERE DES TRANSPORTS A ETE ATTRIBUE.

DATE

22 Septembre 2014

SIGNE

Brenda Shen





3M Canada Company

1840 Oxford Street East, Post Office Box 5757

London, Ontario N6A 4T1

Medical Emergency Telephone: (519) 451-2500, Ext. 2222

Transportation Emergency Telephone (CANUTEC): (613) 996-6666

=====  
Material Safety Data Sheet  
=====

Document id : 11-2661-4 Issue date : 2012/07/25  
Version : 12.01 Supersedes date : 2012/07/11

Copyright, 1997, 3M Canada Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Prepared by: Corporate Regulatory Services, 3M Canada Company  
Telephone: (800) 364-3577, Fax: (800) 603-7758, Web Site: www.3M.ca

-----  
1 Chemical Product and Company Identification  
-----

Tradename:

3M(TM) SCOTCH-WELD(TM) EPOXY ADHESIVE DP-460, OFF-WHITE

Product ID:

62-2796-1435-8 62-2796-6430-4 62-3593-1430-9 62-3593-1435-8  
62-3593-1438-2 62-3593-3530-4 62-3593-3830-8 62-3593-3835-7  
62-2796-3530-4 62-2796-3830-8

Intended Use of Product:

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of the WHMIS controlled components is included. An MSDS for non-WHMIS controlled components may also be included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

Kit component(s):

22-0535-9 3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460, Off-White (Part A)  
22-0526-8 3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460, Off-White (Part B)

Division:

INDUSTRIAL ADHESIVES AND TAPES

3M Canada Company

1840 Oxford Street East, Post Office Box 5757

London, Ontario N6A 4T1

Medical Emergency Telephone: (519) 451-2500, Ext. 2222

Transportation Emergency Telephone (CANUTEC): (613) 996-6666

=====  
Material Safety Data Sheet  
=====

Document id : 22-0535-9 Issue date : 2012/07/25  
Version : 3.01 Supersedes date : 2012/07/11

Copyright, 1997, 3M Canada Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Prepared by: Corporate Regulatory Services, 3M Canada Company  
Telephone: (800) 364-3577, Fax: (800) 603-7758, Web Site: www.3M.ca

---

## 1 Chemical Product and Company Identification

---

### Tradename:

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460, Off-White (Part A)  
Product ID:

### Intended Use of Product:

Part A of a 2-part Epoxy Adhesive  
Industrial use;

### Division:

AD - Industrial Adhesives and Tapes Division

---

## 2 Hazards Identification

---

### Critical Hazards:

Corrosive (Eye Burns): Signs/symptoms can include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Corrosive (Skin Burns): Signs/symptoms can include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

See Sections 7 and 11 for further information.

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part A)

Page 2 of 9 11

---

## 3 Composition/Information on Ingredients

---

Ingredient Name	CAS Number	Percentage
Modified Epoxy Resin	Trade Secret	40 - 70
4,7,10-TRIOXATRIDECANE-1,13-DIAMINE	4246-51-9	30 - 60
AMORPHOUS SILICA	67762-90-7	3 - 7
2,4,6-TRIS((DIMETHYLAMINO)-METHYL) PHENOL	90-72-2	1 - 5
Diethylene glycol mono(3-aminopropyl) ether	112-33-4	0.1 - 1.0

### NOTE:

MODIFIED EPOXY RESIN is a Trade Secret material which is not controlled according to WHMIS criteria.

Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

---

#### 4 First Aid Measures

---

##### Instructions for Eye Contact:

Immediately flush eyes with large amounts of water for at least 30 minutes. Get immediate medical attention.

##### Instructions for Skin Contact:

Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 30 minutes. Get immediate medical attention. Wash contaminated clothing and clean shoes before reuse.

##### Instructions for Inhalation:

Remove person to fresh air. If signs/symptoms develop, get medical attention.

##### Instructions for Ingestion:

Do not induce vomiting. If vomiting occurs naturally, have the victim lean forward to reduce the risk of aspiration. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

---

#### 5 Fire Fighting Measures

---

Flash point: 171.1 C CC

Lower Explosive Limit (%): Not Available

Upper Explosive Limit (%): Not Available

Autoignition temperature: Not Available

##### Suitable Extinguishing Media:

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

---

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part A)

---

Page 3 of 9 []

##### Exposure Hazards during Fire:

No unusual fire or explosion hazards are anticipated.

##### Combustion Products from Fire:

Aldehydes - During Combustion;

Carbon monoxide - During Combustion;

Carbon dioxide - During Combustion;

Oxides of Nitrogen - During Combustion;

##### Unusual Fire and Explosion Hazards

None known.

##### Fire Fighting Procedures:

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

NFPA: Health 3

NFPA: Fire 1

NFPA: Reactivity 0

##### NFPA: Unusual Reaction Hazard

none

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

---

Personal Precautions:

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

Environmental Procedures

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Methods for cleaning up

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part A)

---

Page 4 of 9 |

spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

---

7 Handling and Storage

---

Storage Requirements:

Store away from flammable and combustible materials.

Incompatible Materials:

Store away from heat; Store out of direct sunlight. Store away from acids; Store away from oxidizing agents. Amines; Alcohols; Strong bases;

Ventilation:

Keep container in well-ventilated area.

Use Instructions:

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep container tightly closed. Avoid breathing of vapours, mists or spray. Avoid skin contact. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents.

---

8 Exposure Controls/Personal Protection

---

Personal Protection

---

Eye Protection:

Avoid eye contact.

The following should be worn alone or in combination, as appropriate, to prevent eye contact:

Safety glasses with side shields

Hand Protection:

The following glove material(s) are recommended: neoprene; nitrile rubber; polyethylene/ethylene vinyl alcohol;

Skin Protection:

Avoid skin-contact.

Respiratory Protection:

Avoid breathing of vapours, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Select one of the following approved respirators based on airborne concentration of contaminants and in accordance with regulations: Half facepiece

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part A)

Page 5 of 9

or fullface air-purifying respirator with N95 particulate prefilters;

Ingestion (Prevention):

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep out of the reach of children.

Recommended Ventilation:

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use in a well-ventilated area. If exhaust ventilation is not available, use appropriate respiratory protection. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

Ingredient Exposure Data

Modified Epoxy Resin (Trade Secret)

LD50 (rat, oral) No data available.

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

4,7,10-TRIOXATRIDECANE-1,13-DIAMINE (4246-51-9)

LD50 (rat, oral) 4290 mg/kg

LD50 (dermal, rabbit) □ 2500 mg/kg

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

No data available.

AMORPHOUS SILICA (67762-90-7)

Specific Ingredient Data

LD50 (rat, dermal): > 16 ml/kg

LC50 (rat, inhalation, dust/1hour): 1260 2830 mg/m3

LD50 (rat, oral) > 64 g/kg

LD50 (dermal, rabbit) > 16 g/kg

LC50 (rat, inhalation/4 hours) 315 - 708 mg/m3

Exposure Limits

CMRG: CEIL 5 mg/m3

2,4,6-TRIS((DIMETHYLAMINO)-METHYL)PHENOL (90-72-2)

Specific Ingredient Data

LD50 (rat, dermal): □ 1280 mg/kg

LD50 (rat, oral) 1200 mg/kg

LC50 (rat, inhalation/4 hours) No data available.

Exposure Limits

CMRG: TWA 5 ppm

Diethylene glycol mono(3-aminopropyl) ether (112-33-4)  
LD50 (rat, oral) No data available.  
LC50 (rat, inhalation/4 hours) No data available.  
Exposure Limits  
No data available.

## 9 Physical and Chemical Properties

Physical form, Color, Odour: Liquid; viscous; amber; very mild pungent odour;  
Odour Threshold: No data available.  
pH: Not applicable  
Boiling point/boiling range:  $\geq 171$  C  
Melting point/melting range: Not applicable  
Vapour pressure:  $\leq 3$  mmHg at 20 C  
Water Solubility: Slight  
Partition coefficient (K o/w): Not Available  
Specific gravity: 1.09 Water=1  
Vapour density: 3.72 Air=1  
Volatile organic compounds: 11 gms/liter EPA24T (EU VOC content)  
Evaporation rate: Not Available  
Viscosity: 8500 - 13000 centipoise  
Brookfield @ 23 C  
Percent Volatile: 0 - 1 % by weight ACS

## 10 Stability and Reactivity

Conditions to Avoid:  
Store away from heat;  
Store out of direct sunlight.  
Materials to Avoid:  
Strong acids;  
Strong oxidizing agents;  
Amines;  
Alcohols;  
Strong bases;  
Hazardous Decomposition:  
Aldehydes - During Combustion;  
Carbon monoxide - During Combustion;  
Carbon dioxide - During Combustion;  
Oxides of Nitrogen - During Combustion;  
Stability and Reactivity:  
Stable. Hazardous polymerization will not occur.

## 11 Toxicological Information

Effects from Eye Contact:  
Corrosive (Eye Burns): Signs/symptoms can include cloudy appearance

of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.  
Dust created by cutting, grinding, sanding, or machining can cause eye irritation: Signs/symptoms can include redness, swelling, pain, tearing, and blurred or hazy vision.

Effects from Skin Contact:

Corrosive (Skin Burns): Signs/symptoms can include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Effects from Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Effects from Ingestion:

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the feces and/or vomitus may also be seen.  
May cause chemical gastrointestinal burns.

Sensitization Information:

No data available.

Carcinogenicity:

No data available.

Mutagenicity:

No data available.

Reproductive Effects:

No data available.

Component Based Information:

No data available.

Product Based Information:

No data available.

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part A)

Page 8 of 9

---

## 12 Ecological Information

---

Environmental Data:

Ecotoxicity Data:

Not determined.

Ecofate Data:

Not determined.

Other Effects and Information:

A conservative, screening level assessment of this product indicates that its use and proper disposal are likely to present a low environmental risk. Potential use and misuse are unlikely to cause components to enter the environment in quantities or by routes that could cause adverse environmental impacts.

---

## 13 Disposal Considerations

---

Product as Sold:

Cure (harden, set, or react) the product according to product instructions. Dispose of completely cured (or polymerized) wastes in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material. Combustion products will

include HCl. Facility must be capable of handling halogenated materials.

Product Packaging:

No data available.

Potential for Recycling:

Reclaim if feasible.

Special Instructions:

Since regulations vary, consult applicable regulations or authorities before disposal.

---

#### 14 Transport Information

---

#### Transportation of Dangerous Goods

---

TDG Classification:

Consumer Commodity

Special Information:: Contact 3M for more information.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part A)

Page 9 of 9 [ ]

---

information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for Canadian ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

---

#### 15 Regulatory Information

---

WHMIS Classification:

E

NOTE:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Product Certifications:

The product on this MSDS, or all its components, is included on the following countries' chemical inventories, as noted:

EINECS - European Inventory of Existing Commercial Chemical Substances

PICCS - Philippines Inventory of Commercial Chemical Substances

TSCA - Toxic Substances Control Act (USA)

---

#### 16 Other Information

---

Reason for Reissue:

Added French translation to MSDS

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR



FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

---End---

3M Canada Company  
1840 Oxford Street East, Post Office Box 5757  
London, Ontario N6A 4T1  
Medical Emergency Telephone: (519) 451-2500, Ext. 2222  
Transportation Emergency Telephone (CANUTEC): (613) 996-6666

=====

Material Safety Data Sheet

=====

Document id	: 22-0526-8	Issue date	: 2012/07/11
Version	: 3.00	Supersedes date	: 2009/05/26

Copyright, 1997, 3M Canada Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Prepared by: Corporate Regulatory Services, 3M Canada Company  
Telephone: (800) 364-3577, Fax: (800) 603-7758, Web Site: [www.3M.ca](http://www.3M.ca)

-----

1 Chemical Product and Company Identification

-----

Tradename:

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460, Off-White (Part B)  
Product ID:

Intended Use of Product:

Part B of a 2-part Epoxy Adhesive  
Industrial use;  
Division:  
AD - Industrial Adhesives and Tapes Division

-----

2 Hazards Identification

-----

Critical Hazards:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Moderate Skin Irritation: Signs/symptoms can include localized redness, swelling, itching, and dryness.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may

. include redness, swelling, blistering, anditching.  
See Sections 7 and 11 for further information.

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part B)

Page 2 of 9 □

---

### 3 Composition/Information on Ingredients

---

Ingredient Name	CAS Number	Percentage
EPOXY RESIN	25068-38-6	85 - 93
ACRYLIC POLYMER (NJTSRN 04499600-5018P)	Trade Secret	7 - 13
3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER	2530-83-8	0.1 - 1.0

#### NOTE:

ACRYLIC POLYMER is a Trade Secret material which is not controlled according to WHMIS criteria.

Each percentage is expressed as the ratio of the weight of the ingredient to the weight of the controlled product.

---

### 4 First Aid Measures

---

#### Instructions for Eye Contact:

Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

#### Instructions for Skin Contact:

Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water for at least 20 minutes or until chemical is removed. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

#### Instructions for Inhalation:

If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

#### Instructions for Ingestion:

Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

---

### 5 Fire Fighting Measures

---

Flash point: 248.9 C CC  
Lower Explosive Limit (%): Not applicable  
Upper Explosive Limit (%): Not applicable  
Autoignition temperature: Not Available  
Suitable Extinguishing Media:  
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).  
Exposure Hazards during Fire:  
No unusual fire or explosion hazards are anticipated.  
Combustion Products from Fire:

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part B)

Page 3 of 9 □

- Aldehydes - During Combustion;
- Carbon monoxide - During Combustion;
- Carbon dioxide - During Combustion;
- Irritant Vapours or Gases - During Combustion;
- Unusual Fire and Explosion Hazards
- None known.

#### Fire Fighting Procedures:

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Water may be used to blanket the fire. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

NFPA: Health	2
NFPA: Fire	1
NFPA: Reactivity	0
NFPA: Unusual Reaction Hazard	

none

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

---

## 6 Accidental Release Measures

---

### Personal Precautions:

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

### Environmental Procedures

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

### Methods for cleaning up

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part B)

Page 4 of 9 []

---

absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

---

## 7 Handling and Storage

---

Storage Requirements:

No data available.

Incompatible Materials:

Store away from heat; Store out of direct sunlight. Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature reaction (exotherm) with production of intense heat and smoke. Store away from oxidizing agents. Amines;

Ventilation:

No data available.

Use Instructions:

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep container tightly closed. Avoid skin contact. Avoid breathing of vapours. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional use only. Avoid contact with oxidizing agents.

---

## 8 Exposure Controls/Personal Protection

---

### Personal Protection

---

#### Eye Protection:

Avoid eye contact.

The following should be worn alone or in combination, as appropriate, to prevent eye contact:

Indirect vented goggles;

#### Hand Protection:

The following glove material(s) are recommended: neoprene; nitrile rubber; polyethylene/ethylene vinyl alcohol;

#### Skin Protection:

Avoid skin contact.

#### Respiratory Protection:

Avoid breathing of vapours. Avoid breathing of dust created by cutting, sanding, grinding or machining. Select one of the following approved respirators based on airborne concentration of contaminants and in accordance with regulations: Half facepiece or fullface air-purifying respirator with organic vapour cartridges

3M(TM) Scotch-Weld(TM) Epoxy Adhesive DP-460,  
Off-White (Part B)

Page 5 of 9

---

and N95 particulate prefilters;

#### Ingestion (Prevention):

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep out of the reach of children.

#### Recommended Ventilation:

Use with appropriate local exhaust ventilation. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment.

### Ingredient Exposure Data

---

EPOXY RESIN (25068-38-6)

16 Other Information

Reason for Reissue:

The following Sections and topics have been updated or revised:

Section 2 - Hazards Identification - Critical Hazards;

Section 3 - Composition/Information on Ingredients;

Section 4 - First Aid Measures;

Section 5 - Fire Fighting Measures

Section 6 - Accidental Release Measures;

Section 7 - Handling and Storage;

Section 8 - Exposure Controls/Personal Protection;

Section 9 - Physical and Chemical Properties;

Section 10 - Stability and Reactivity;

Section 11 - Toxicological Information;

Section 15 - Regulatory Information

The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

---End---

# Material Safety Data Sheet



Revision Number: 002.3

Issue date: 03/20/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** LOCTITE EA 934NA AERO PART A QT  
known as EA 934NA PART A QUART

**IDH number:** 936944

**Product use:** Adhesive for the Aerospace Industry

**Item number:** AA9174016

**Region:** Canada

**Company address:**  
Henkel Canada Corporation  
2515 Meadowpine Boulevard  
Mississauga, Ontario L5N 6C3

**Contact information:**  
Telephone: 905.814.6511  
MEDICAL EMERGENCY Phone: Poison Control Center  
1-877-671-4608 (toll free) or 1-303-592-1711  
TRANSPORT EMERGENCY Phone: CHEMTREC  
1-800-424-9300 (toll free) or 1-703-527-3887  
Internet: www.henkelna.com

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**Physical state:** Solid  
**Color:** Gray  
**Odor:** Slight

**WHMIS hazard class:** D.2.B

**WARNING:** MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.  
MAY CAUSE ALLERGIC SKIN REACTION.

**Relevant routes of exposure:** Skin, Inhalation, Eyes

### Potential Health Effects

**Inhalation:** May cause respiratory tract irritation.  
**Skin contact:** This product may cause irritation to the skin. This product may cause an allergic skin reaction.  
**Eye contact:** This product may cause irritation to the eyes.  
**Ingestion:** Not a relevant route of exposure. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Existing conditions aggravated by exposure:** Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Triglycidyl-p-aminophenol	5026-74-4	30 - 60
Aluminum	7429-90-5	30 - 60
Phenol polymer with formaldehyde, glycidyl ether	28064-14-4	10 - 30
Glass, oxide, chemicals	65997-17-3	5 - 10
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Treated fumed silica	67762-90-7	1 - 5

## 4. FIRST AID MEASURES

**Inhalation:** If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.

<b>Skin contact:</b>	Remove contaminated clothing and footwear. Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Get immediate medical attention. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Notes to physician:</b>	Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

<b>Flash point:</b>	> 93 °C (> 199.4 °F)
<b>Autoignition temperature:</b>	Not determined
<b>Flammable/Explosive limits - lower:</b>	Not determined
<b>Flammable/Explosive limits - upper:</b>	Not determined
<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear full protective clothing. Wear self-contained breathing apparatus.
<b>Unusual fire or explosion hazards:</b>	May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
<b>Hazardous combustion products:</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
<b>Sensitivity to Mechanical Impact:</b>	Not available.
<b>Sensitivity to static discharge:</b>	Not available.

## 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	For the Part A plus Part B adhesive mixture, follow curing schedule as recommended in product literature. Do not heat Part A at temperatures greater than 80 °C (176 °F). This material may self-react at higher temperatures and cause an exotherm. The exotherm has the potential for release of excessive energy and toxic gasses. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.
<b>Storage:</b>	For safe storage, store between 0 °C (32°F) and 5 °C (41°F) Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Refrigerated storage is recommended to maintain product quality.

For information on product shelf life contact Henkel Canada Customer Service at 800-263-5043.

### 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

### 14. TRANSPORT INFORMATION

#### Canada Transportation of Dangerous Goods - Ground

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

#### International Air Transportation (ICAO/IATA)

Proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (Triglycidyl-p-aminophenol, Bisphenol-F Epichlorhydrin resin)
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III

#### Water Transportation (IMO/IMDG)

Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Triglycidyl-p-aminophenol, Bisphenol-F Epichlorhydrin resin)
Hazard class or division:	9
Identification number:	UN 3077
Packing group:	III
Marine pollutant:	Triglycidyl-p-aminophenol, Bisphenol-F Epichlorhydrin resin
Exceptions:	Classified per IMDG Amendment 34; Effective Jan 1, 2010.

### 15. REGULATORY INFORMATION

#### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

#### United States Regulatory Information

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

### 16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: Mark Mau, Regulatory Affairs Specialist

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



# Material Safety Data Sheet



Revision Number: 002.2

Issue date: 03/04/2014

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** LOCTITE EA 934NA AERO PART B  
8OZ known as EA 934NA PART B 8 OZ

**IDH number:** 936945

**Product use:** Adhesive for the Aerospace Industry

**Item number:** AB9174014

**Region:** Canada

**Company address:**  
Henkel Canada Corporation  
2515 Meadowpine Boulevard  
Mississauga, Ontario L5N 6C3

**Contact information:**  
Telephone: 905.814.6511  
MEDICAL EMERGENCY Phone: Poison Control Center  
1-877-671-4608 (toll free) or 1-303-592-1711  
TRANSPORT EMERGENCY Phone: CHEMTREC  
1-800-424-9300 (toll free) or 1-703-527-3887  
Internet: www.henkelna.com

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**Physical state:** Liquid  
**Color:** Amber  
**Odor:** ammoniacal

**WHMIS hazard class:** D.2.A, D.2.B, E

**DANGER—CORROSIVE! CAUSES EYE, SKIN AND RESPIRATORY TRACT BURNS.  
MAY CAUSE ALLERGIC SKIN REACTION.**

**Relevant routes of exposure:** Skin, Inhalation, Eyes

### Potential Health Effects

**Inhalation:** Mists, vapors or liquid may cause severe irritation or burns.  
**Skin contact:** This product is severely irritating to the skin and may cause burns. This product may cause an allergic skin reaction.  
**Eye contact:** This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.  
**Ingestion:** Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

**Existing conditions aggravated by exposure:** Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Amine adduct	Proprietary	60 - 100
Diethylenetriamine	111-40-0	10 - 30
Triethylenetetramine	112-24-3	1 - 5

## 4. FIRST AID MEASURES

**Inhalation:** If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.

**Skin contact:** Remove contaminated clothing and footwear. Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.

IDH number: 936945

Product name: LOCTITE EA 934NA AERO PART B 8OZ known as EA 934NA PART B 8 OZ

<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Get immediate medical attention. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Notes to physician:</b>	Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

<b>Flash point:</b>	> 93 °C (> 199.4 °F)
<b>Autoignition temperature:</b>	Not determined
<b>Flammable/Explosive limits - lower:</b>	Not determined
<b>Flammable/Explosive limits - upper:</b>	Not determined
<b>Extinguishing media:</b>	Water spray (fog), foam, dry chemical or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear full protective clothing. Wear self-contained breathing apparatus.
<b>Unusual fire or explosion hazards:</b>	May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
<b>Hazardous combustion products:</b>	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
<b>Sensitivity to Mechanical Impact:</b>	Not available.
<b>Sensitivity to static discharge:</b>	Not available.

## 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	For the Part A plus Part B adhesive mixture, follow curing schedule as recommended in product literature. Do not heat Part B at temperatures greater than 100 °C (212 °F). This material may self-react at higher temperatures and cause an exotherm. The exotherm has the potential for release of excessive energy and toxic gasses. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full. Do not cut, grind, weld, or drill on or near this container.
<b>Storage:</b>	For safe storage, store between 0 °C (32°F) and 25 °C (77°F) Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

For information on product shelf life contact Henkel Canada Customer Service at 800-263-5043.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Amine adduct	None	None	None	None
Diethylenetriamine	1 ppm TWA (SKIN)	None	None	None
Triethylenetetramine	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None

**Engineering controls:**

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

**Respiratory protection:**

If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

**Eye/face protection:**

Wear chemical goggles; face shield (if splashing is possible).

**Skin protection:**

Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Amber
Odor:	ammoniacal
Odor threshold:	Not available.
pH:	Not determined
Vapor pressure:	< 1.0 mm hg (20 °C (68°F))
Boiling point/range:	207 °C (404.6 °F)
Melting point/ range:	Not determined
Specific gravity:	0.96
Vapor density:	Not determined
Flash point:	> 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower:	Not determined
Flammable/Explosive limits - upper:	Not determined
Autoignition temperature:	Not determined
Evaporation rate:	Not determined
Solubility in water:	Soluble
Partition coefficient (n-octanol/water):	Not determined
VOC content:	< 10 g/l per SCAQMD Rule 1124 [EPA Test Method 24/304-91] (estimated)

## 10. STABILITY AND REACTIVITY

**Stability:**

Stable at normal conditions.

**Hazardous reactions:**

May occur.

**Hazardous decomposition products:**

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.

**Incompatible materials:**

Keep away from strong oxidizing agents, strong Lewis or mineral acids.

**Conditions to avoid:**

Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Do not heat mixed adhesive unless curing surfaces to be bonded. Failure to observe these precautions may result in excessive heat build-up causing an exotherm.

## 11. TOXICOLOGICAL INFORMATION

**Product toxicity data:**

Henkel is not aware of any toxicity data on the specific mixture of chemical components contained in this product.

**Toxicologically synergistic products:**

Not available.

Refer to the following for Irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Amine adduct	No	No	No
Diethylenetriamine	No	No	No
Triethylenetetramine	No	No	No

Hazardous components	LD50s and LC50s	Health Effects/Target Organs
Amine adduct	None	No Records
Diethylenetriamine	Oral LD50 (RAT) = 1,080 mg/kg Oral LD50 (RAT) = 2.33 g/kg	Allergen, Irritant, Eyes
Triethylenetetramine	None	Allergen, Corrosive, Developmental, Irritant, Mutagen

## 12. ECOLOGICAL INFORMATION

**Ecological information:**

Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:**

Dispose of according to Federal, State and local governmental regulations.

## 14. TRANSPORT INFORMATION

**Canada Transportation of Dangerous Goods - Ground**

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylenetriamine, Triethylenetetramine)  
Hazard class or division: 8  
Identification number: UN 2735  
Packing group: II

**International Air Transportation (ICAO/IATA)**

Proper shipping name: Amines, liquid, corrosive, n.o.s. (Diethylenetriamine, Triethylenetetramine)  
Hazard class or division: 8  
Identification number: UN 2735  
Packing group: II

**Water Transportation (IMO/IMDG)**

Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Diethylenetriamine, Triethylenetetramine)  
Hazard class or division: 8  
Identification number: UN 2735  
Packing group: II

## 15. REGULATORY INFORMATION

### Canada Regulatory Information

**CEPA DSL/NDL Status:**

All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

### United States Regulatory Information

**TSCA 8 (b) Inventory Status:**

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

## 16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: Mark Mau, Regulatory Affairs Specialist

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.